What is Claimed Is:

1. A chord for a joist, the chord having a length and a cross-section substantially symmetrical about a center line, the chord cross-section comprising:

a horizontal base having two ends; and

a pair of downwardly extending legs, each leg comprising:

a chamfered portion extending downward and outward from one end of the base at an acute angle to the horizontal;

an upper vertical portion, perpendicular to the base, extending downward from a lower end of the chamfered portion;

an inwardly recessed portion, parallel to the base, extending towards the center line from a lower end of the upper vertical portion; and

an attachment portion, perpendicular to the base, extending downward from an inner end of the inwardly recessed portion;

wherein the attachment portions of the legs define an opening for receiving a web of the joist, the opening extending substantially the entire length of the chord.

2. The chord of claim 1, wherein the base and each leg portion is substantially planar throughout the entire length of the chord.

3. The chord of claim 2, wherein the acute angle is about 45 degrees.

4. The chord of claim 1, wherein the chamfered portions of the legs are for stiffening the ends of the base.

5. The chord of claim 2, wherein the base and the opening each have a respective width, and the width of the base is greater than the width of the opening.

6. The chord of claim 5, wherein the ratio of the width of the base to the width of the opening is about 1.3 to 1.

7. The chord of claim 2, wherein the distance between the upper vertical portions of the legs is about twice the vertical distance between the base and the inwardly recessed portions of the legs.

8. The chord of claim 1, wherein the base and legs comprise cold rolled steel.

9. The chord of claim 2, wherein the distance between the upper vertical portions of the legs is greater than an overall vertical height of the legs.

10. A joist having a first chord, the first chord having a length and a cross-section substantially symmetrical about a center line, the first chord cross-section comprising:

a horizontal base having two ends; and

a pair of downwardly extending legs, each leg comprising:

a chamfered portion extending downward and outward from one end of the base at an acute angle to the horizontal;

an upper vertical portion, perpendicular to the base, extending downward from a lower end of the chamfered portion;

an inwardly recessed portion, parallel to the base, extending towards the center line from a lower end of the upper vertical portion; and

an attachment portion, perpendicular to the base, extending downward from an inner end of the inwardly recessed portion;

wherein the attachment portions of the legs define an opening for receiving a web of the joist, the opening extending substantially the entire length of the first chord.

11. The joist of claim 10, further comprising a plurality of webs, each web having a pair of opposed vertical walls for fitting in the opening, a first end of each web being rigidly attached to the first chord at the attachment portions.

12. The joist of claim 11, wherein the first chord has a longitudinal axis, and at least one of the webs is attached to the chord at about a 45 degree angle to the longitudinal axis.

13. The joist of claim 12, wherein at least one of the webs is attached to the first chord perpendicular to the longitudinal axis.

14. The joist of claim 11, wherein the webs each have a second end, the joist further comprising a second chord substantially identical to the first chord and disposed substantially parallel to the first chord, the second end of each web being rigidly attached to the second chord at the second chord's attachment portions.

15. The joist of claim 14, wherein the joist comprises a Warren truss, a Pratt truss, or a Howe truss.

16. The joist of claim 11, further comprising a seat member for attaching the joist to a structural member, the seat member having a pair of opposed vertical walls for fitting in the opening and abutting the first chord attachment portions, a notch disposed such that the seat member is rigidly attachable to the attachment portions and to one of the web members, and a pair of flanges for attachment to the structural member.

17. A method of assembling a joist, the method comprising:

providing a first elongated joist chord with a cross-section having a center line and including a substantially horizontal base, a pair of substantially vertical side walls whose top ends are attached to the top wall, a pair of lower horizontal walls extending inward from the bottom ends of the side walls towards the center line of the chord cross-section, and a pair of vertical attachment portions extending downward from the inward-extending ends of the lower horizontal walls;

rigidly assembling a first end of a web member having a pair of opposed walls spaced to fit between and abut the pair of attachment portions to the first chord such that the attachment portions abut the web member opposed walls; and

welding each of the web member walls to a respective one of the attachment portions without moving the web member/chord assembly.

18. The method of claim 17, comprising:

providing a seat member for attaching the joist to a structural member, the seat member having a pair of opposed vertical walls fitting between and abutting the chord attachment portions, and a notch for accommodating the web member;

wherein the assembly step comprises rigidly assembling the seat member to the chord such that the chord attachment portions abut the seat member opposed walls proximal to the web member opposed walls; and

wherein the welding step comprises welding the seat member to the web member and to both the attachment portions.

19. The method of claim 17, comprising assembling a plurality of the webs to the first chord, wherein the webs each have a second end, the method further comprising rigidly assembling a second chord, substantially identical to the first chord and disposed substantially parallel to the first chord, to the second end of each web at the second chord's attachment portions prior to the welding step.

20. The method of claim 19, comprising inducing camber in the first and second chords prior to the welding step.

21. The method of claim 20, comprising inducing the camber at a ratio of approximately 1 inch per 50 feet of the length of the assembled joist.

22. The method of claim 17, comprising placing the first chord/web assembly in a flat position prior to the welding step such that a side of the assembly is facing upward, and performing all the welding on the upward-facing side of the assembly.

23. The joist of claim 16, wherein the seat member extends beyond a distal longitudinal end of the first chord.